El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Respiratory Care Technology**
COURSE RUBRIC AND NUMBER	**RSPT 2319**
COURSE TITLE	**Mechanical Ventilation for the Neonatal/Pediatric Patient**
COURSE CREDIT HOURS	**3 3 : 1** **Credits Lec Lab**

I. Catalog Description

Studies mechanical ventilation for the neonatal and pediatric patient. A grade of "C" or better is required in this course to take the next course. **Prerequisites: RSPT 1431. Corequisites: RSPT 2353 and RSPT 2361. (3:1). Lab fee.**

II. Course Objectives

A. Unit I. Principles of Neonatal Resuscitation

1. Set up an admission bed for Neonatal Intensive Care Unit (NICU) in a laboratory simulation.
2. Explain the use of the Apgar score to assess the newborn.
3. Describe the overview of resuscitation in the delivery room
4. Identify the RCPs role in neonatal resuscitation in the delivery room and in ICN.

B. Unit II. Principles of Neonatal/Pediatric Mechanical Ventilation

1. Classify neonatal/pediatric ventilators.
2. Describe the basic design of a neonatal pressure-limited ventilator.
3. Describe the function of the various control variables.
4. Explain how humidifiers and circuits affect delivered volumes.

C. Unit III. Initiation of Neonatal Ventilator Support

1. Identify the indications for ventilatory support.
2. Identify the factors that determine initial ventilator parameters.
3. Calculate delivered tidal volumes from a pressure-limited ventilator.
4. Perform an initial ventilator set up in a laboratory simulation.

D. Unit IV. High-Frequency Ventilation for Neonates

1. Describe the neonatal lung injury sequence.
2. Compare and contrast the differences between conventional ventilation and high-frequency ventilation (HFV).
3. Discuss high-frequency ventilation (HFV) in terms of:
   a. Indications
   b. Clinical use
   c. Hazards
4. Identify various strategies for the application of High-Frequency Oscillatory Ventilation (HFOV) in select pathophysiological conditions.

E. Unit V. Special Modes of Neonatal Ventilation

1. Explain the concept in the application of liquid ventilation.
2. Explain the concept of Extra Corporeal Membrane Oxygenation (ECMO).
3. Identify the clinical criteria for patient selection for the use of ECMO.
4. Compare the venoarterial and the venovenous circulatory routes.
5. Identify the physiological complications of ECMO
6. Explain the concept of and set up Nitric Oxide (NO) ventilation.
7. Identify the criteria for patient selection for the use of NO.

III. THECB Learning Outcomes (WECM)

1. Explain procedures for initiating mechanical ventilation.
2. Describe ventilator management strategies.
3. Evaluate weaning criteria and determine weaning methods.
4. Identify indications, complications, and physiological effects of ventilatory support.

IV. Evaluation

5 Unit exams	50%	A= 90-100
Homework, Quizzes	10%	B= 80-89
Lab exercises	20%	C= 75-79
Final	20%	I or F = 74 or below

Note: 74.5=75

V. Disability Statement (American with/Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.